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Cornell Improves Maple Cream for the 2004 Maple Season

by Nate Abbott

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ITHACA, NY: Inspect most breakfast tables, and you find the usual spreads: peanut butter, jelly, cream cheese, and jam.

Cornell University microbiologist Randy Worobo and food scientist Olga Padilla-Zakour, of the New York State Agricultural Experiment Station, in Geneva, NY, have increased the shelf life and quality of a little-known alternative called maple cream, making it easier to manufacture and store, and more appealing to the consumer.

Maple cream is the smooth-textured spread made by heating syrup to high temperatures and continuously stirring it as it cools. Despite its name, maple cream contains no dairy products. Instead, it offers the rich flavor of maple syrup in a form that can be drizzled over ice cream, licked off the spoon, or spread on toast, bagels, muffins, or pancakes. Until now, maple cream has not had the widespread appeal due its tendency to mold and separate. Because of these deficiencies, maple cream was only available on a limited basis. Most consumers have never tried it.

Padilla-Zakour and Worobo devised ways to produce maple cream that has a creamier texture and lasts up to six months. To prevent the formation of surface mold, the researchers added a food preservative, potassium sorbate, at a low concentration of 500 ppm. To address the issue of separation, 10 percent of the maple syrup undergoes the process of inverting the sugar from sucrose to glucose and fructose by the addition of the natural enzyme invertase.

The result is a maple cream or maple spread that lasts longer, retains the same flavor, and possesses a creamier texture. The processing will cost producers less than ten cents per pound of finished product, and requires equipment already found in typical maple syrup operations.

Worobo and Padilla-Zakour estimate that developing good manufacturing practices for shelf-stable maple cream could increase production and marketing by 10 percent, resulting in an additional \$1.6 million per year in revenue for maple producers. For consumers, it adds value to what is already a naturally sweet product.

Chuck Winship, of Sugarbush Hollow, in Springwater, NY, produces 600 gallons of maple syrup a year, and has sold 200 pounds of maple cream since August. He wrote the grant that drove the maple cream development

Pictures are linked to hi-res scans



Cathy Cogswell, a field assistant at the Arnot Forest, taps a sugar maple in preparation for the 2004 season. Photos courtesy Cornell University.



Maple cream is continuously stirred as it cools to become thick and spreadable.

Photos courtesy Cornell University.

project, and was one of two industry cooperators, along with Lyle Merle of Merle Maple Farms, in Attica, NY. In limited taste tests at his sugar shack, Merle has found customers prefer the creamier maple cream 8 out of 10 times. His sales of maple cream have increased 6 percent since he started making the new shelf-stable maple cream last August.

Industry has always considered maple cream to be an under-marketed maple product with great potential. Peter Smallidge, NYS extension forester and director of the Arnot Teaching and Research Forest, in Van Etten, NY, adds, "The marketing opportunities for producers will increase because this new maple cream can be displayed prominently and made more visible to consumers. If the marketing increases consumption and the producers respond to the demand, more syrup will have to be devoted to cream production."

Smallidge expects to have limited quantities of the product available during the Arnot Forest's Maple Weekend, March 20 and 21. [For more information, call 607-589-6076 or link to the Arnot Forest web site at <http://www.dnr.cornell.edu/arnot/>]

A Renewed Commitment to New York's Maple Industry

The success of shelf-stable maple cream is a good example of Cornell's renewed commitment to the New York maple syrup industry. In December 2003, the College of Agriculture and Life Sciences announced plans to reinvigorate the Cornell Maple Program (CMP). The plan is a cooperative effort among maple producers, extension educators, researchers and others that calls for integrating applied research and extension, and developing strategic and working partnerships with key players in the New York maple industry.

Some of the goals include: rebuilding and upgrading facilities at both Cornell maple research and production sites- the Arnot Teaching and Research Forest in Van Etten, NY, and the Uihlein Sugar Maple Field Station in Lake Placid, NY-and hiring a statewide maple specialist. Peter Smallidge, senior extension associate in the department of natural resources, has already been directed to undertake additional maple extension activities.

New York's Maple Weekend, March 20 and 21

The arrival of the shelf-stable maple cream is a timely one, as the New York maple industry prepares for the 2004 Maple Weekend, March 20 and 21. Over 75 maple producers across the state will open their sugar shacks for demonstrations and tastings. [For a list of locations, link to www.mapleweekend.com]

More than 1525 commercial producers with 100 or more taps are engaged in maple production in New York, making the Empire State the second-largest maple producer in the U.S. Maple production in New York State was valued at \$6.83 million in 2002, and represents more than one-sixth of the total U.S. production.

The maple cream project was supported with funding from a USDA-SARE Farmer/Grower Grant, USDA Fund for Rural America, and the New York State Agricultural Experiment Station.

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Notes to Editors: New York maple producers have just started tapping their sugar maple trees for the 2004 season. For a list of maple producers in your area who will be open for Maple Weekend, March 20 and 21, link to www.mapleweekend.com

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